

```
Irssi: -> DNS -> presentation.orange.event.dreamhack.se
Irssi: -> Connect -> presentation.orange.event.dreamhack.se[77.80.253.131:6697]
Irssi: -> Connection established -> presentation.orange.event.dreamhack.se
presentation.orange.event.dreamhack.se *** Looking up your hostname
presentation.orange.event.dreamhack.se *** Checking Ident
```

```
Irssi: -> DNS -> presentation.orange.event.dreamhack.se
Irssi: -> Connect -> presentation.orange.event.dreamhack.se[77.80.253.131:6697]
Irssi: -> Connection established -> presentation.orange.event.dreamhack.se
presentation.orange.event.dreamhack.se *** Looking up your hostname
presentation.orange.event.dreamhack.se *** Checking Ident
presentation.orange.event.dreamhack.se *** Got ident response
presentation.orange.event.dreamhack.se *** Found your hostname
```

-> - presentation.orange.event.dreamhack.se Message of the Day -



Welcome to
IRC From The Other Side

[-] == [Rules] ===== [-]

- Feel free to asks questions throughout the presentation.
- There is no such thing as a dumb question.
- Enjoy your stay here at DreamHack :-)

[-] == [Speakers] ===== [-]

- suom1 (Markus Viitamäki)
Twitter: @suom1
Email: suom1@underworld.no
- ahf (Alexander Færøy)
Twitter: @ahfaeroey
Email: ahf@irssi.org

-> End of /MOTD command.

We are here because we <3 IRC.

/whois suom1

```
-> [--- Whois for suom1 ---]
-> Realname : Markus Viitamäki
-> Email    : suom1@underworld.no
-> Twitter  : @suom1
-> Job      : Systems engineer at EA DICE.
-> Location : Stockholm, Sweden.
-> Server   : presentation.orange.event.dreamhack.se [DreamHack 2013 Orange]
->          : IRC Administrator
->          : is using a secure connection
-> Idle     : 0 days 0 hours 0 mins 1 secs [signon: Fri Oct 4 17:39:35 2013]
-> End of WHOIS
```

/whois ahf

```
-> [--- Whois for ahf ---]
-> Realname : Alexander Færøy
-> Email    : ahf@irssi.org
-> Twitter  : @ahfaeroey
-> Job      : Software Engineer at eTilbudsavis ApS.
-> Location : Copenhagen, Denmark.
-> Server   : presentation.orange.event.dreamhack.se [DreamHack 2013 Orange]
->          : IRC Developer and Operator
->          : is using a secure connection
-> Idle     : 0 days 0 hours 0 mins 1 secs [signon: Fri Oct 4 17:39:35 2013]
-> End of WHOIS
```

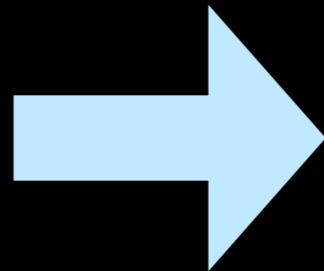
Who are you?

Tedious History Class

- Designed and implemented by Jarkko “WiZ” Oikarinen in 1988.
- First IRC server: `tolsun.oulu.fi`
- A protocol where IPv6 quickly became popular.

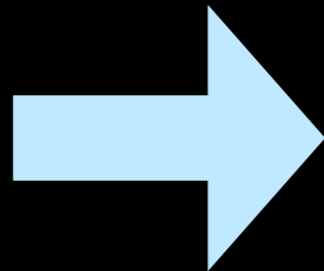
Let's start by having a look at Facebook.

Facebook User



Facebook.com

Facebook User



Facebook.com

Facebook CDN

Facebook Chat

Facebook Mobile

Facebook Widgets

Facebook Authentication

...

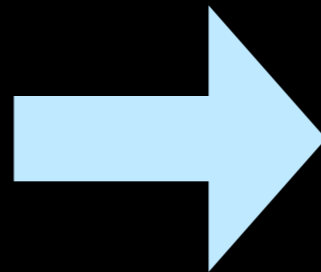
Facebook Summary

- One entry point for the user.
- Distributed across multiple DC's in multiple countries.
- Very high uptime experience for the user.

Let's have a look at IRC.

QuakeNet

QuakeNet User



irc.quakenet.org

euroserv.fr.quakenet.org

xs4all.nl.quakenet.org

portlane.se.quakenet.org

servercentral.il.us.quakenet.org

underworld{1,2}.no.quakenet.org

port80{a,b,c}.se.quakenet.org

jubii2.dk.quakenet.org

blacklotus.ca.us.quakenet.org

dreamhack.se.quakenet.org

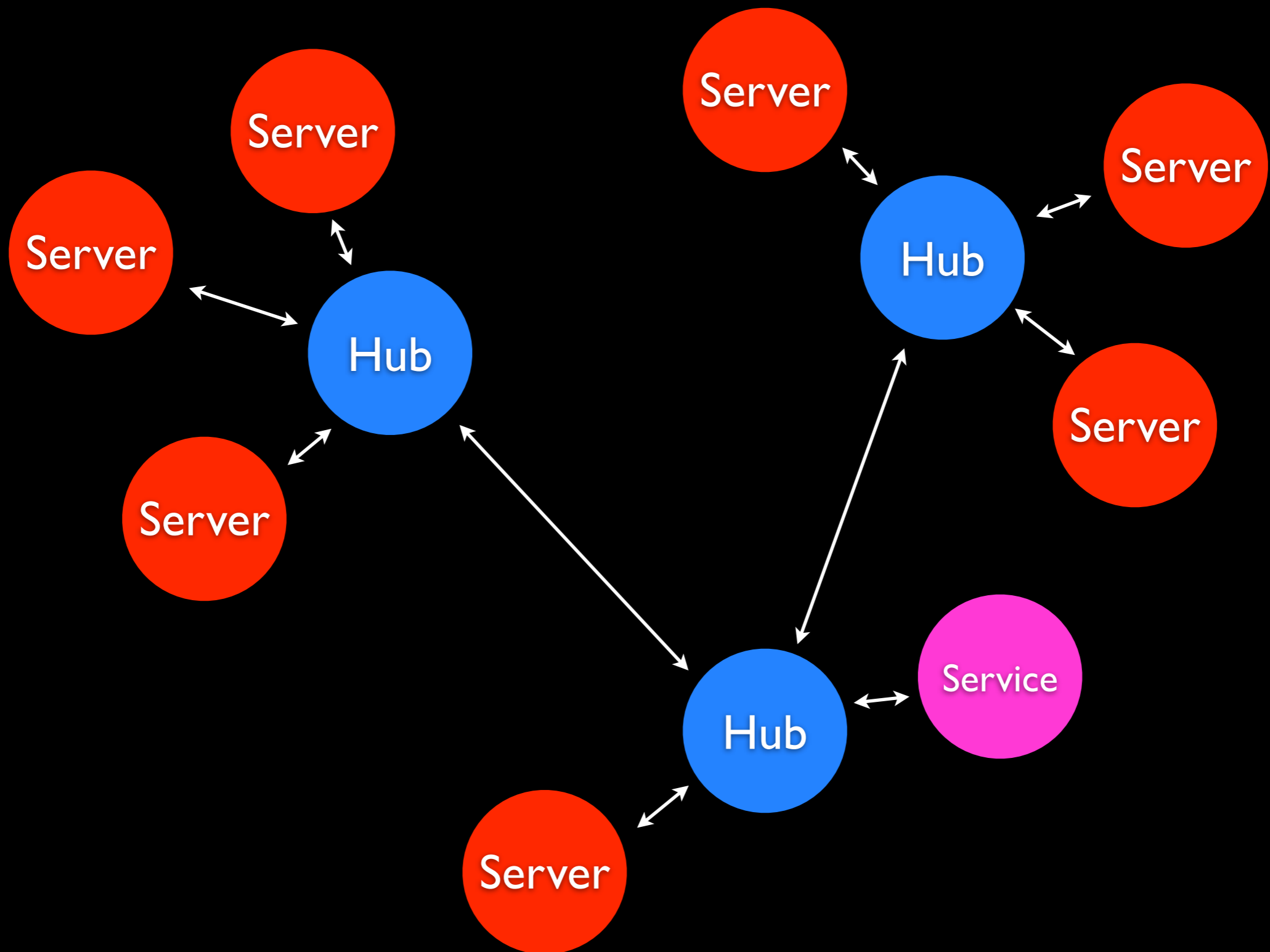
irc.ipv6.quakenet.org

Let's have a look at how IRC networks are designed.

IRC Network

- Multiple client leaf nodes.
- Multiple hidden hubs.
- Some networks used to have hubs that were open for client connections as well.
- Some network have various network services. We'll get back to these later.

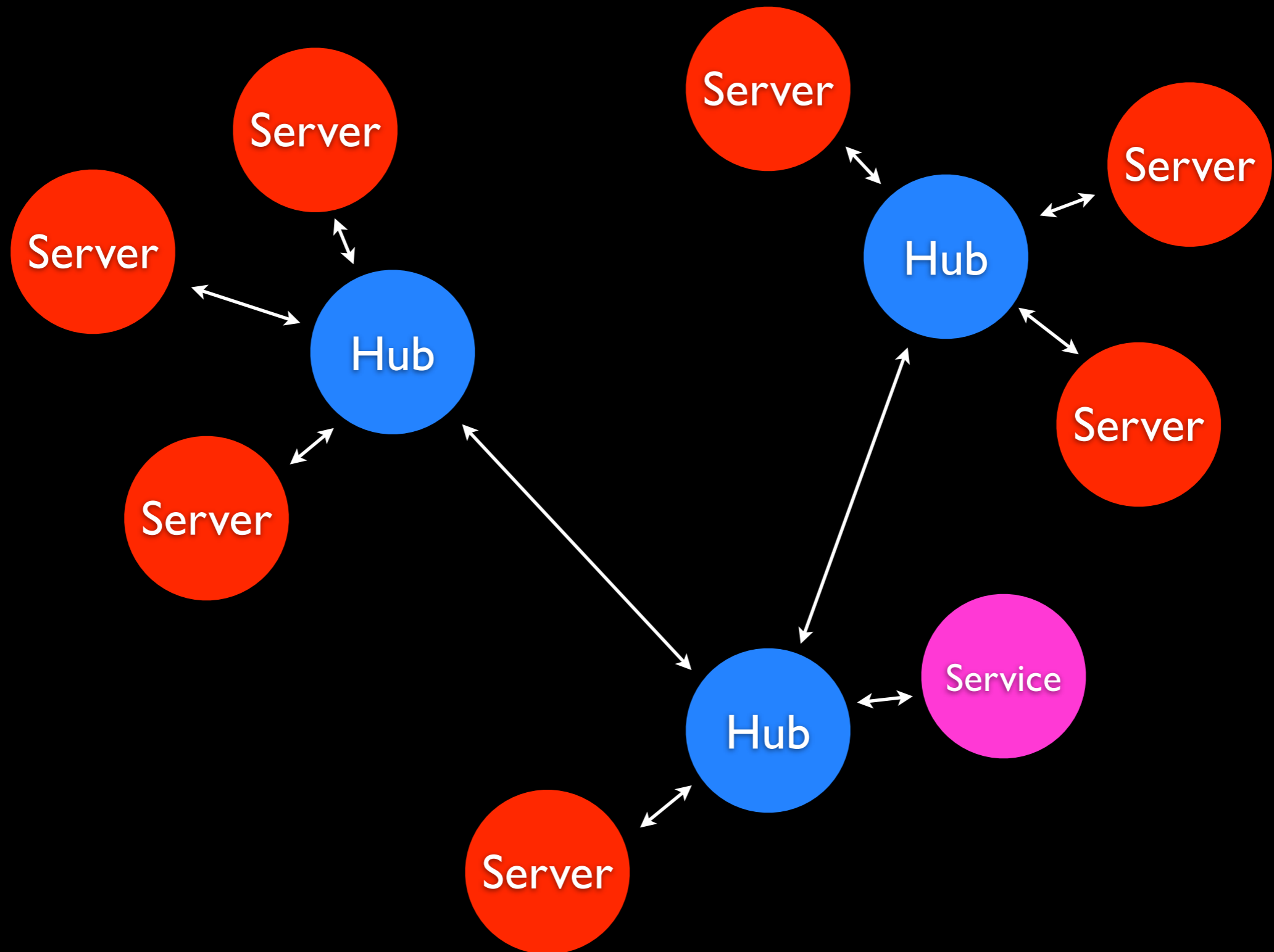
IRC Network



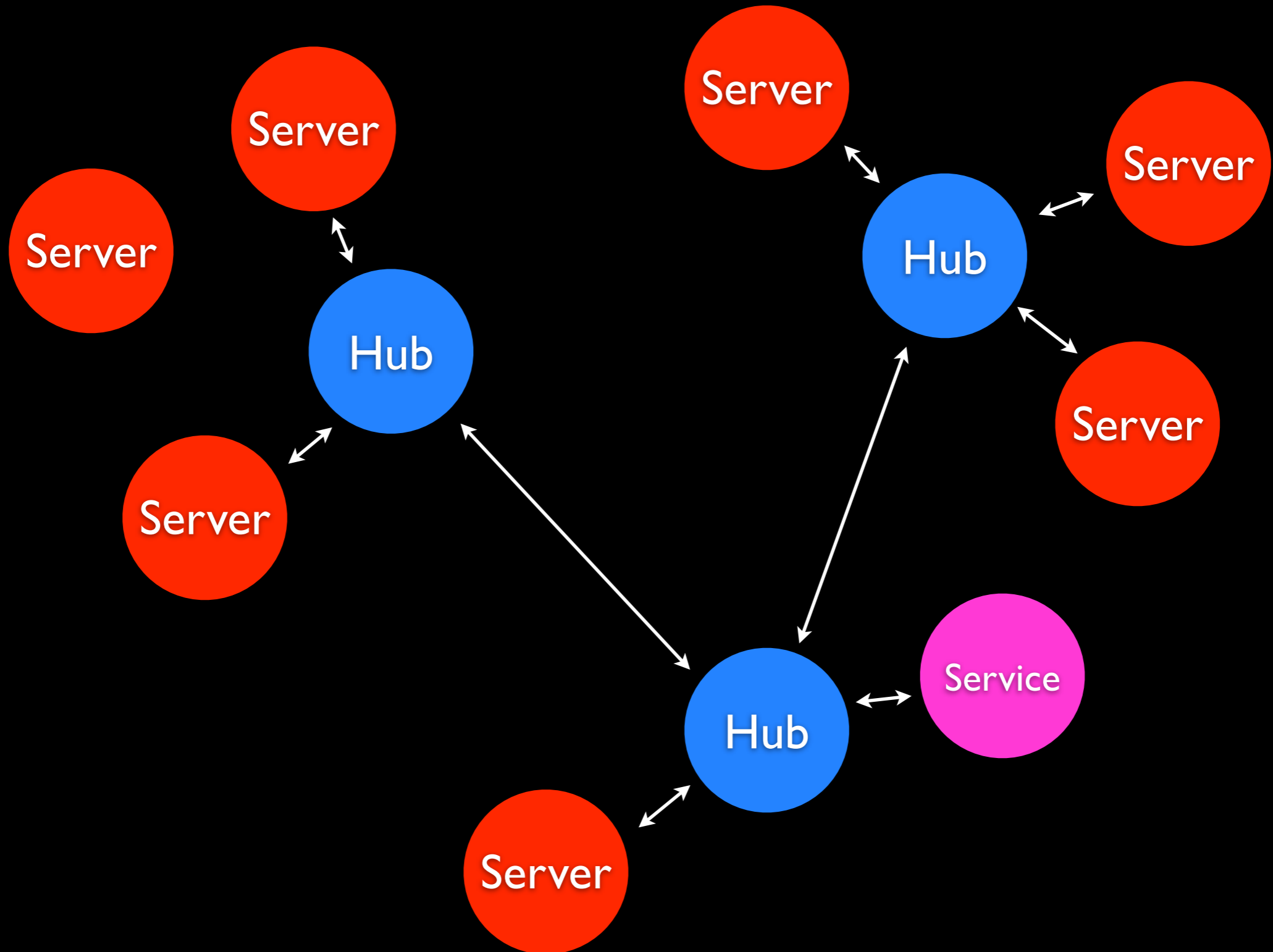
But, what about security and privacy on IRC?

Distributed Denial of Service attacks and mitigation.

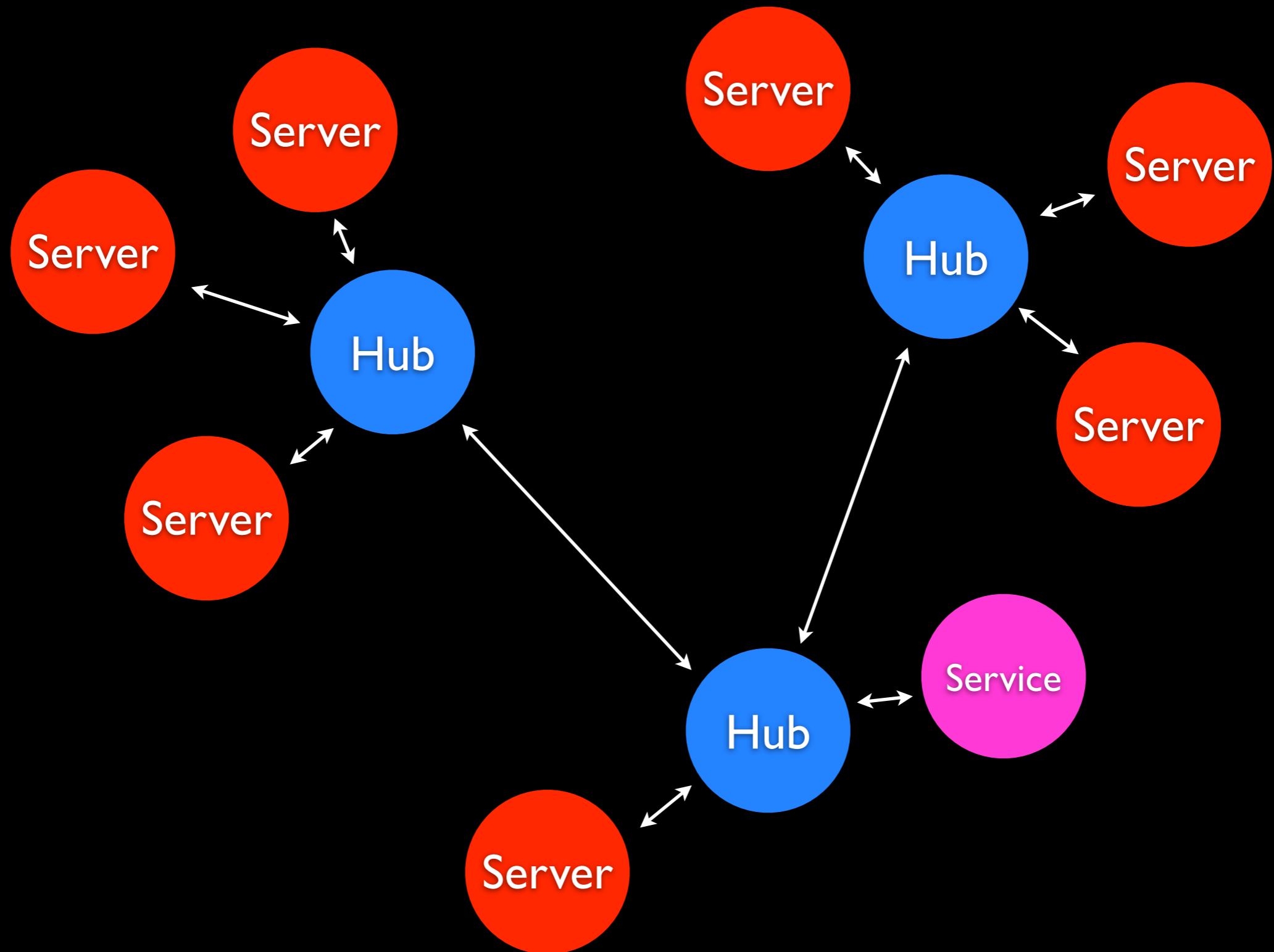
DDoS Impact



DDoS Impact

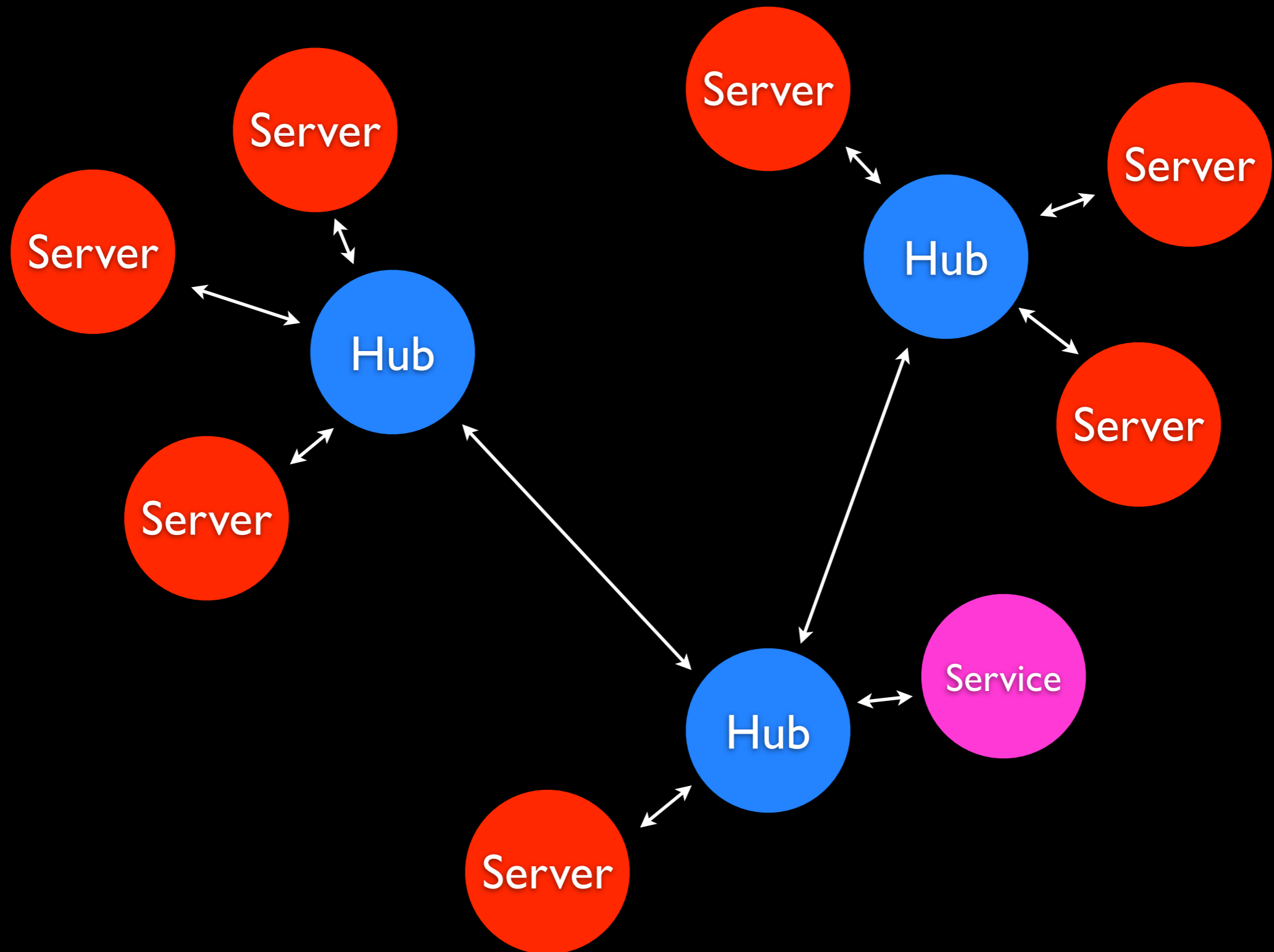


DDoS Impact

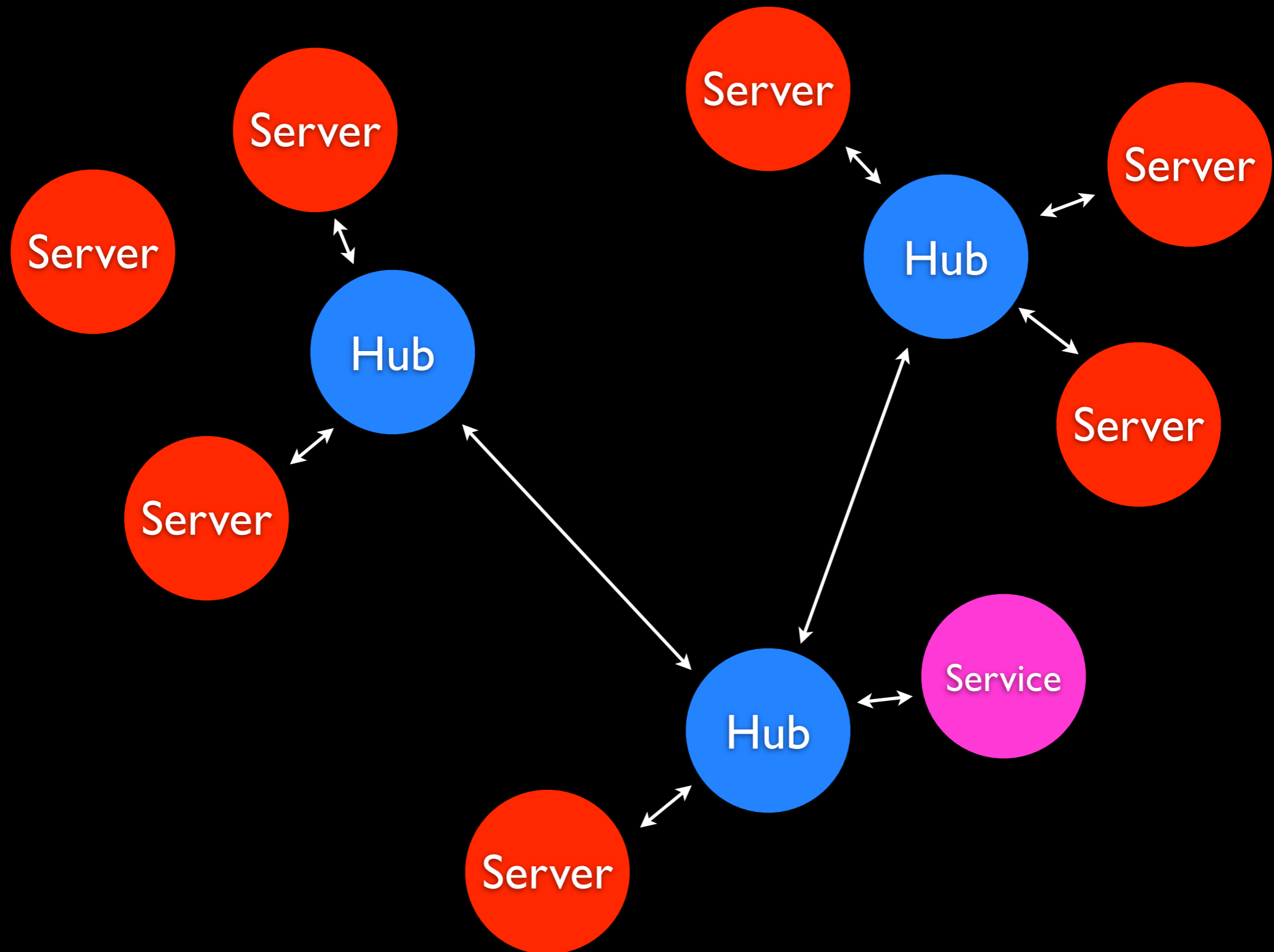


How do we handle the merge after a network split?

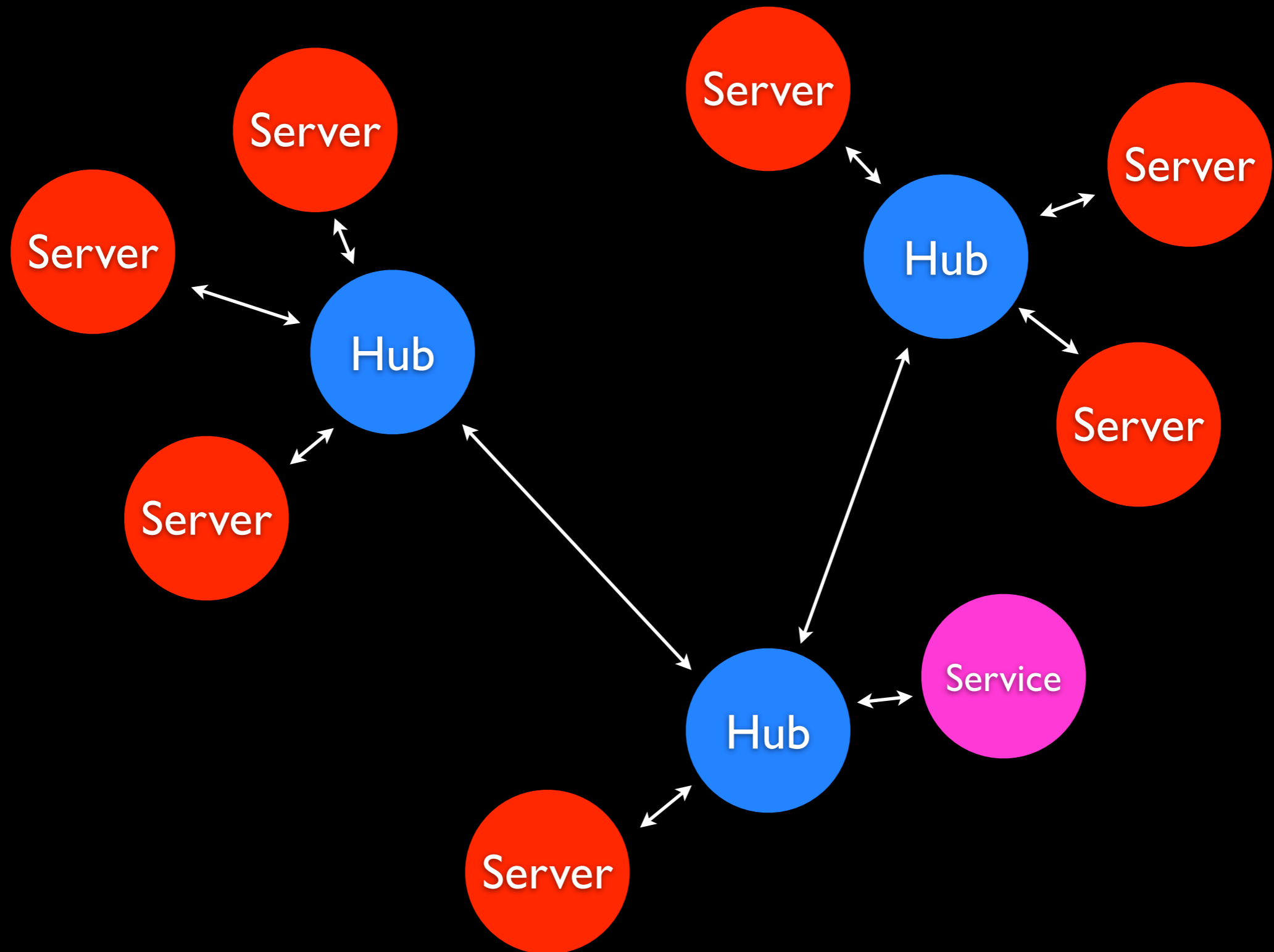
IRC Network Split



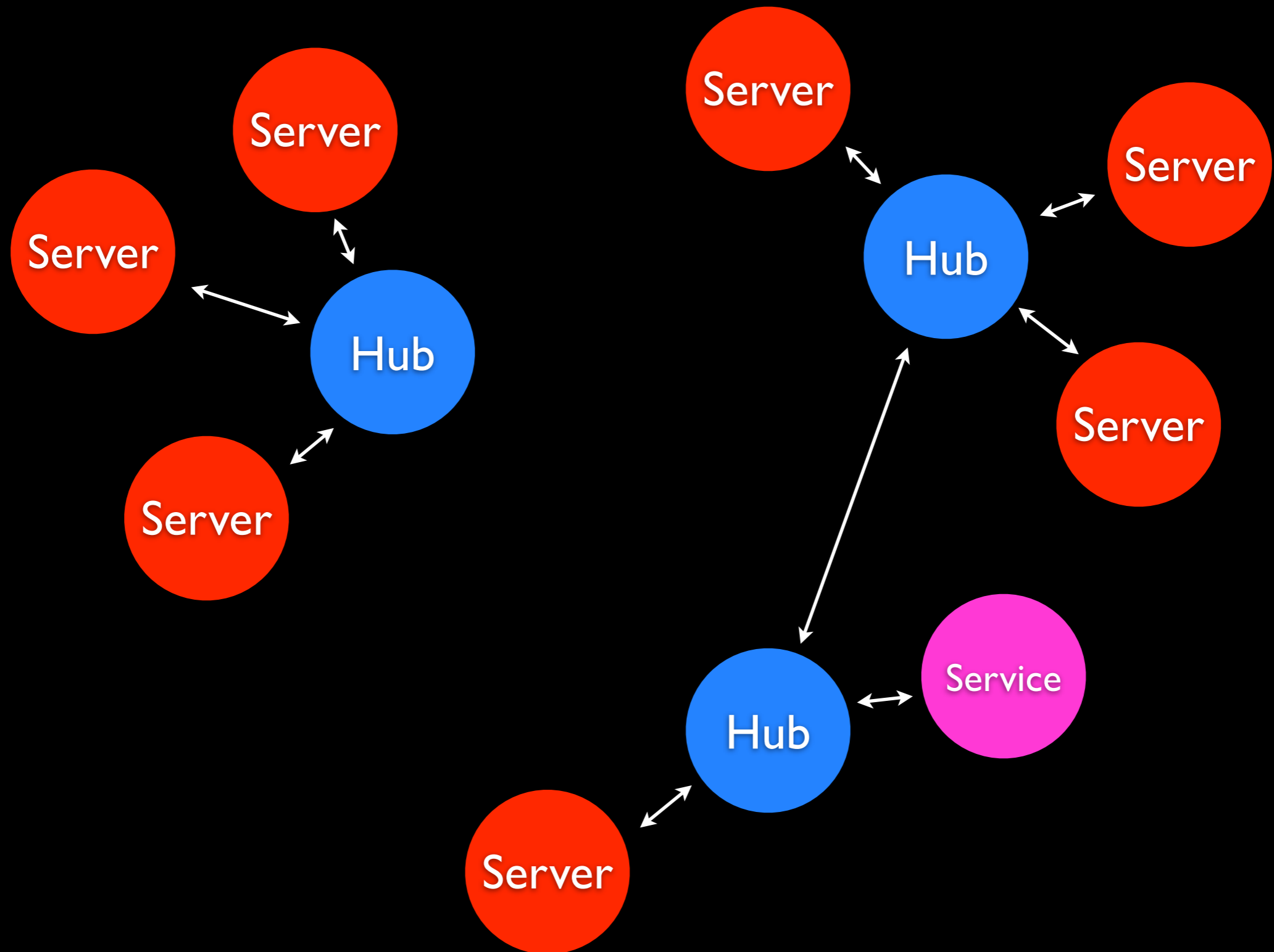
IRC Network Split



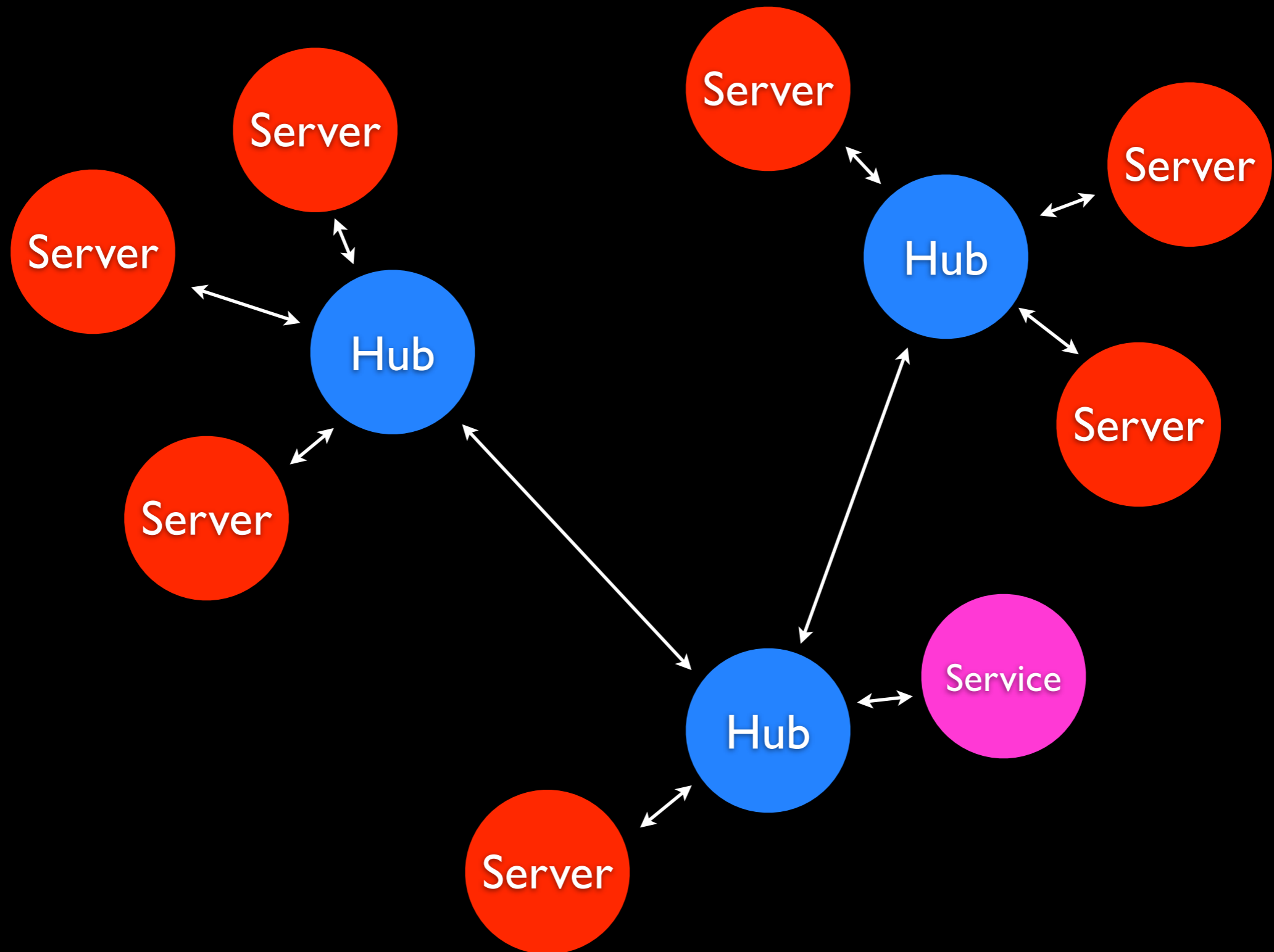
IRC Network Merge



IRC Network Split



IRC Network Merge



Privacy on IRC?

Tor?

Privacy Checklist

- Use SSL, if it's available.
- Only allow trusted people in your private channels.
- Take a discussion with your friends about logging.
- Use channel mode +S (SSL only), if the network supports it.

Privacy Checklist

- Consider encryption (FiSH?)
- Consider Tor.
- Consider running your own server as well.
You will learn a lot from this.
- If you hosting IRC services, please enable DNSSEC and DANE.

Abuse Mitigation

- DNS Blacklisting.
- Port scanning of incoming client.
- Pattern based blacklisting of malware.

IRC Philosophy and Politics.

Local operators or network wide staff?

Services or no services?

And can we later on add services?

Different political views on network operations.

QuakeNet vs. IRCnet.

The Protocol Itself

- RFC's: 1459, 2810, 2811, 2812 and 2813.
- Line-oriented 1980'ies style protocol.
- Encoding issues?
- Simple and easy to implement.

IRC in 2013 and beyond?

IRC usage in the free and open source community.

What are your thoughts on the future of IRC?

Thanks for listening!

Questions?

Irssi: Removed reconnection to server presentation.orange.event.dreamhack.se:6697